

ART 3A AMDT

1 CLAIMS JC06 Rec'd/PCT/PTO 01 APR 2005

1. A swing damping arrangement, particularly an arrangement pertaining to a swing damper (1) for supporting a tool (5) that hangs from a crane arm (2) or the like, wherein the damper (1) includes an upper part (11) connected to the crane arm (2), and a lower part (12) which supports a working implement (5) or the like, either directly or via a rotator (4) for instance, wherein the upper part (11) and the lower part (12) are pivotally connected to each other via a pivot joint (13), and wherein the damper (1) includes a brake arrangement (50), characterised in that the brake arrangement (50) includes a brake unit (60) having discs (70,80) that can swing around the pivot axle (14) of the pivot joint (13), in that at least one (70) of said discs is secured against rotation relative to the upper part (11), in that at least one (80) of said discs is secured against rotation relative to said lower part (12), in that the arrangement includes a tensioning element (90;110;130) which functions to press the discs (70,80) together in a braking operation, and in that the tensioning element (90;110;130) is located at least partially within one or two pivot bearings (46) located between the upper part (11) and the lower part (12).
2. An arrangement according to Claim 1, characterised in that the brake unit (60) is situated in a space (200) between two pivot bearings (46) located between the upper part (11) and the lower part (12).
3. An arrangement according to Claim 1 or 2, characterised in that the upper part (11) includes an abutment surface (22) for driving at least one disc (70).
4. An arrangement according to any one of Claims 1-3, characterised in that the lower part (12) includes an abutment surface (34) for driving at least one disc (80).
5. An arrangement according to any one of Claims 1-4, characterised in that at least one disc (70) has a brake lining (75) on at least one side thereof.
6. An arrangement according to any one of Claims 1-5, characterised in that discs (70,80) include a through-passing hole for the tensioning element (90;110;130).

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An arrangement according to any one of Claims 1-6, characterised in that the force generated by the tensioning element (90;110;130) in order to press the discs (70,80) together is based on a spring force and/or on the application of a pressure medium.

- 5        8. A method relating to a swing damper, particularly to a swing damper (1) for carrying a tool (5) that hangs from a crane arm (2) or the like, wherein the swing damper (1) includes an upper part (11) which is connected to the crane arm (2), and a lower part (12) which carries a working implement (5) or the like, either directly or via a rotator (4) for instance, wherein the upper part (11) and the lower part (12) are pivotally connected together via a pivot joint (13), and wherein the swing damper (1) includes a brake arrangement (50), characterised in that swinging movement is braked by virtue of said upper part (11) being caused to entrain at least one disc (70) of a brake unit (60) as said part swings, and by virtue of the lower part (12) being caused to entrain at least one disc (80) of the brake unit (60) as said lower part (12) swings, and in that the discs (70,80) are pressed together by a tensioning element (90;110;130) in a braking operation where the tensioning element (90;110;130) is located at least partially within one or two pivot bearings (46) located between the upper part (11) and the lower part (12).
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